

Baseline Report

Grant 720FDA19GR00137 – Prevention and Management of Acute Malnutrition in Cameroon’s Far North Region – Sector 1

Context

As indicated in our proposal document, the baseline data for the nutrition sector under this project are drawn from the SMART survey conducted in 2019 with funding from KFW, the Ministry of Public Health of Cameroon and UNICEF. Please note that a separate research report will be submitted for Sector 2 of the project, Humanitarian Studies, Analysis, or Applications. Our operations research will include baseline, endline and monitoring surveys of children enrolled in the food voucher program to treat moderate acute malnutrition to evaluate participation in and effectiveness of this strategy.

Location and Timing

The survey is part of a nutritional surveillance system that has been in place since 2007 and is updated annually. In 2019 the survey was carried out between November 12 and December 2 in the four most at-risk regions of the country (**Far North**, North, Adamaoua and East). Helen Keller International participated in the steering committee that validated the methodology and the results. We present the findings for the full Far North region although our project targets seven high risk health districts (*Moutourwa, Moulvoudaye, Mindif, Kar-Hay, Kaele, Guidiguis, and Guere*) of the total of 30.

Methods and Data Sources

The data are collected via a cross-sectional survey using the SMART methodology, which is a standardized, simplified and rapid survey representative at the regional level. Sampling follows a two stage randomization, with selection probability proportional to the size of the population, the first stage by zone as defined by the general census, the second randomized selection by household. The sample size was determined to estimate the prevalence of general acute malnutrition and included n=531 households with n=494 children 0-59 months in the Far North. Data collected include anthropometric measures following standard protocols. Age was recorded from official documents or estimated according to a calendar of local events. Weight was measured using SECA scales to a precision of 100g (children were weighed without clothing). Health was measured with SHORR boards to the precision of mm; children <2 were measured reclining; ages 2+ standing. Middle-upper arm circumference was measured to the nearest mm with tapes placed at the midpoint between shoulder and elbow. Infant and young child feeding practices and child illnesses were assessed according to the standard World Health Organization guidance¹. Retrospective mortality estimates covered the period between August 11 (Tabaski holiday) and November 11. Dietary diversity among adolescents and women of reproductive age (10-49 years) is also assessed. The survey was conducted on android smartphones using the kobo collect/ODK application and KoboToolbox web interface.

Findings

Nutritional status of children under 5 years in the Far North Region

<i>Indicators</i> ²	<i>Far North</i>	<i>All surveyed regions</i>
Global acute malnutrition (GAM)	5.2% [3.1- 8.6]	5.2% [4.1- 6,7]
Severe acute malnutrition (SAM)	1.4% [0.7- 3.1]	1.0% [0.5- 1.7]
Chronic malnutrition	38.2% [31.9-44.9]	36.9% [33.1-40.9]
Underweight	20.2% [15.3-26.1]	18.7% [16.3-21.5]
Overweight	1.6% [0.7-3.6]	2% [1.3-3.1]

¹ World Health Organization (2008). Indicators for assessing infant and young child feeding practices : conclusions of a consensus meeting held 6–8 November 2007 in Washington D.C., USA.

² Indicators according to 2006 WHO growth standards. Acute malnutrition <-2SD reference norm for weight for height (severe <-3SD). Chronic malnutrition <-2SD reference norm height for age. Overweight >+2 SD reverence norm for weight for height.

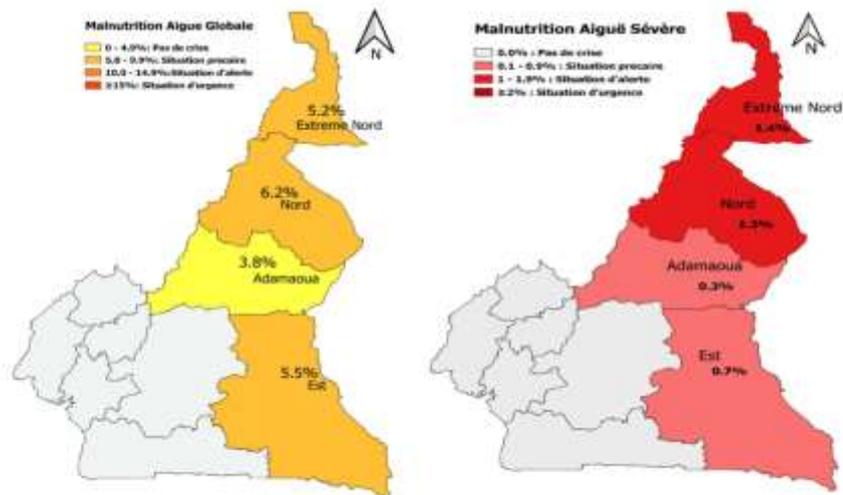
Infant and Young Child Feeding

Indicators	Far North	All surveyed regions
Timely initiation of breastfeeding (%)	26.1	24.6
Exclusive breastfeeding (0-5 mo) (%)	23.1	32.5
Timely introduction complementary foods (%)	66.7	73.4
Dietary diversity score	3.4	3.8
Minimum dietary diversity (%)	26.7	34.2
Minimum meal frequency (%)	53.5	53.6
Minimally adequate diet (%)	18.8	22.2

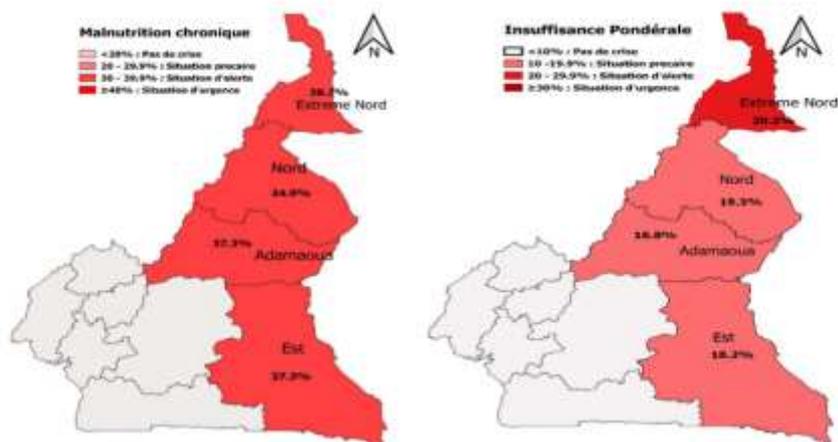
Mortality

Indicators	Far North	All surveyed regions
Crude mortality rate (per 1,000 persons/day)	0.4	0.33
Under five mortality rate (per 1,000 live births)	0.52	0.61

Map of the prevalence of acute malnutrition



Map of the prevalence of chronic malnutrition



Analysis and limitations

The child nutrition indicators reveal that undernutrition remains an important public health problem in the Far North Region and reflect sub-optimal infant and young child feeding practices as well as, in all likelihood, the economic impacts of the conflict, recurring climate shocks, and suboptimal health, water and sanitation infrastructure. The survey also found extremely high rates of childhood illness, with 25% of children under five suffering fever and 36% with diarrhea in the two weeks prior to the survey. The project will evaluate improvements in the practices of exclusive breastfeeding of children 0-5.9 months and minimum dietary diversity among children 6-23 months of age, but clearly findings suggest that prevention and prompt treatment of childhood illnesses must be a high priority.

Comparison of key indicators SMART 2017 vs 2019, Extreme North

Nutritional Status		
<i>Indicators</i>	<i>SMART 2017</i>	<i>SMART 2019</i>
Global acute malnutrition (GAM) (weight-for-height)	4.5 [2.8-7.1]	5.2 [3.1-8.6]
Severe acute malnutrition (SAM) (weight-for-height)	1.1 [0.4-2.7]	1.4 [0.7-3.1]
Chronic malnutrition (height-for-age)	40.9 [33.3-49.1]	38.2 [31.9-44.9]
Underweight (weight-for-age)	19.2 [15.2-24.0]	20.2 [15.3-26.1]

Infant & Young Child Feeding (%)		
<i>Indicators</i>	<i>SMART 2017³</i>	<i>SMART 2019</i>
Timely initiation of breastfeeding (%)	12.3	26.1 [19.2-34.3]
Exclusive breastfeeding (0-5 mo) (%)	31.0	23.1 [7.7-52.0]
Timely introduction of complementary foods (%)	32.8	66.7 [33.5-88.8]
Minimum meal frequency (%)	20.7	53.5 [40.6-65.9]
Minimum dietary diversity (%)	38.8	26.7 [18.4-37.2]
Minimum acceptable diet	20.7	18.8 [11.7-28.9]
Dietary diversity score	2.0	3.4

Although the means on the table above suggest changes in indicators of both improvements and deterioration, the confidence intervals are extremely wide, thus these movements may be statistical artifacts. The survey is designed to provide rapid estimates of the prevalence of acute malnutrition rather than rigorous and granular detail. Given the one year timeframe, we judged this option to be cost-effective and adequate.

In addition to the IYCF indicators, the project will support government health facilities to achieve SPHERE standards in the management of acute malnutrition, including applying the national protocol for the management of severe acute malnutrition with and without complications, and testing a novel food voucher treatment for the management of moderate acute malnutrition. A separate research report will be submitted with baseline, monitoring and final survey results and analysis by the end of the project.

Our targets for changes in infant and young child feeding indicators are ambitious for a one-year program (exclusive breastfeeding of children 0-5.9 months increase from 23.1 to 30 percent; minimum dietary diversity among children 6-23 months from 26.7 to 30 percent). These practices will also be assessed in the research study being conducted under this grant.

³ No confidence intervals reported

Performance Targets

Sector 1: Nutrition		
Sub-sector 1	Management of Moderate Acute Malnutrition (MAM)	Target
Required		
Indicator (1)	Number of sites established/rehabilitated for outpatient care	64
Indicator (2)	Number of people (children 6-59 months) admitted to MAM voucher treatment, by sex and by age ⁴	3,708
Indicator (3)	Number of health care providers and volunteers trained in the prevention and management of MAM using food vouchers and cooking demonstrations, by sex	941
Indicator (4)	Recovery rate among children 6-59 months treated for MAM through food vouchers and nutrition promotion, by sex and by age	>75%
Indicator (5)	Default rate among children 6-59 months treated for MAM through food vouchers, by sex and by age	<15%
Indicator (6)	Death rate among children 6-59 months treated for MAM through food vouchers, by sex and by age	<3%
Indicator (7)	Relapse rate among children 6-59 months treated for MAM through food vouchers, by sex and by age	<3%
Indicator (8)	Average length of stay for children 6-59 months treated for MAM through food vouchers, by sex and by age	3 months
Indicator (9)	Total USD value of food vouchers redeemed by beneficiaries	\$286,297
Custom		
Indicator (10)	Formative supervision systems strengthened assessed by: - Number of supervisions of health centers by field staffs conducted with on-site training, by quarter - Number of supervisions of community structures by field staffs conducted with on-site training, by quarter - Number of joint supervision visits by district health team and HKI staff, by quarter	8 8 4
Indicator (11)	Number of SAM children identified and referred to treatment Without complications With complications	2,948 328
Custom Outcome Indicator		
Indicator (12)	Median weekly consumption frequency of (any) and (specific) foods covered by the food voucher [Specific refers to key categories in the basket: egg, fruit, vegetable, dairy, oil, flour; sugar will not be counted]	7 (any) ≥6 (specific)
Sub-sector 2	Infant and Young Child Feeding in Emergencies	
Required		
Indicator (1)	Number and percentage of infants 0-<6 mo. who are exclusively breastfed	30%
Indicator (2)	Number and percentage of children 6-<24 mo. receiving foods daily in 4 food groups	60%
Indicator (3)	Number of people receiving behavior change interventions to improve infant and young child feeding practices	79,453
Custom		
Indicator (4)	Number of cooking demonstrations organized	49 per week
Indicator (5)	Number of participants at cooking demonstrations, by sex	30,000 (F) 15,000 (M)

⁴ Note the Ministry of Health does not currently collect age/sex disaggregated data but HKI will strive to add this to our own data collection.